

## ABSTRACT

A method of speech recognition with compensation is provided by modifying HMM models trained on clean speech with cepstral mean normalization. For each speech utterance the MFCC vector is calculated for the clean database. This mean MFCC vector is added to the original models. An estimate of the background noise is determined for a given speech utterance. The model mean vectors adapted to the noise is determined. The mean vector of the noisy data over the noisy speech space is determined and this is removed from model mean vectors adapted to noise to get the target model.

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